# Analysis Report about Amber Heard 2018 Reddit Contributions

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## Introduction

Note: This report is a part of Case Study: "Reddit Social Network Analysis Against Influence Operation"

By analyzing accounts posting/commenting against a victim of a Social Bot Disinformation/Influence Operation.

## We have four main datasets scraped from Reddit

- 1. A dataset with submissions & comments data (2018).
- 2. Users Data (from 2006 to 2018).
- 3. A merged dataset (submissions & comments data, users data).
- 4. Daily creation data (# of accounts created per day from 2006 to 2018).

The data Timezone is Epoch/UTC.

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# Overview

- About 20% of 2018 contributions were made by

- banned 1 (8.38 % → 586 ).
- unverified 2 (11.3 % → 789 ).
- About **20** % of **2018 submissions** were made by
  - banned (14.9 % → 1175 )
  - unverified ( 6.48 % → 511 ).
- **28.5** % of the **peak day (03/07/2018)** were made by
  - banned (17.4 % → 33 ).
  - unverified (11.1 % → 21 ).
- 21.45% of submissions of the peak day submissions (03/07/2018) were made by
  - banned accounts (15.3 % → 305 ).
  - unverified accounts (6.15 % → 123 ).

#### Statistics of unverified accounts

- Description of contributions scores

-	count³	789
-	mean	18.65
-	std	55.2
-	min	-64
-	25%	1
-	50%	3
-	75%	11
-	max	578

- The percentage of **2018 contributions** made by **Unverified** accounts **11.3%**
- Total unverified accounts contributions in 2018, 789.
- Total unverified accounts comments in 2018, 566.
- Number of contributed users is 275.
- The percentage of **2018 submissions** made by **Unverified** accounts **6.15** with **123 submissions**.

#### Statistics of Banned accounts

- Description of contributions scores

-	count	585
-	mean	38.42
-	std	157.2
-	min	-53
-	25%	1
-	50%	3
-	75%	25
-	max	2847

<sup>&</sup>lt;sup>1</sup> This user banned from reddit

<sup>&</sup>lt;sup>2</sup> The user has not verified mail for this account.

<sup>&</sup>lt;sup>3</sup> Number of contributions of unverified accounts which have scores.

- The percentage of 2018 **contributions** made by **Banned** accounts **8.38**%
- Total banned accounts contributions in 2018 is 789.
- Total banned accounts comments in 2018 is 281.
- The percentage % of 2018 **submissions** made by **Banned** accounts **15.3%**.
- Total banned accounts submissions in 2018 305

#### Top users statistics:

#### Fakeposter77 (banned):

- Made only one submission on 11-11-2018.
- This user's contributions got the highest scores.

#### Michikoperdue (banned):

- this user made 3 contributions with the same text in the same time in 3 different subreddits
  - r/Celebsnudess 1
  - r/CelebNudes 1
  - r/celebJObuds 1

#### Hnglmkrnglbrry (unverified)

- unverified account with the highest score.
- Account Created at: 2017-01-30
- A lot of unverified users has a link karma of 1 → 'nsfwalt\_100', 'EverGenius', 'windinmynuts',
   'giantfatdelicousbird', 'giantfatdelicousbird', 'giantfatdelicousbird', 'epicimagebot', 'giantfatdelicousbird',
   'giantfatdelicousbird', 'IWannaBangBiel', 'IWannaBangBiel', 'IWannaBangBiel', 'IWannaBangBiel',
   'IWannaBangBiel', 'lamsWholams', 'Tedmonds30', 'juggalobobby1', 'Sonmeisterbank', 'MrGreen098',
   'Ragobie0404'

#### - Murph420 (unverified)

- has the minimum comment karma

#### - Ibracadabra101 (unverified)

- this user has the highest score among the unverified users

#### - HardSellDude (unverified)

- this user has the minimum score among the unverified users.

#### Statistics of 2018 accounts.

- Total contributions in 2018 made by newly created accounts(2018): 875
- The percentage % of 2018 contributions made by newly created accounts(2018): 12.51
- Total comments in 2018 made by newly created accounts(2018): 636
- Total submissions in 2018 made by newly created accounts(2018): 239
- The percentage % of 2018 submissions made by newly created accounts(2018): 11.95

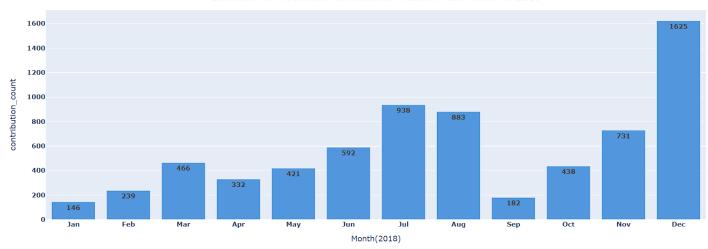
## - 2018 accounts contributions scores

-	count	6987
-	mean	36.4
-	std	170.11
-	min	-92
-	25%	1
-	50%	3
-	75%	16
-	max	4188

## **Peaks**

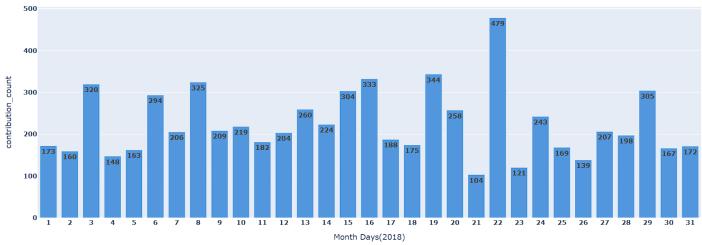
## **Peak Months**

Estimation of the number contributions created in each month of 2018



# Peak Days of The Months<sup>4</sup>

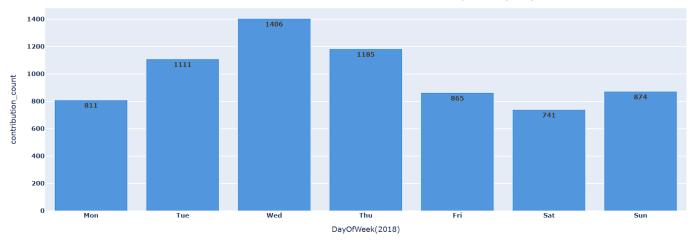
Estimation of the number contributions created in each DayOfMonth in 2018



<sup>&</sup>lt;sup>4</sup> Day of month means day 1 in all months, 2 in all months.. etc. (sum of all contributions on the same day of each month)

## Peak Days of The Week

Estimation of the number contributions created in each DayOfWeek (2018)



## **Peak Hours**

Number of contrbutions Comment/Submission in day hours (2018)



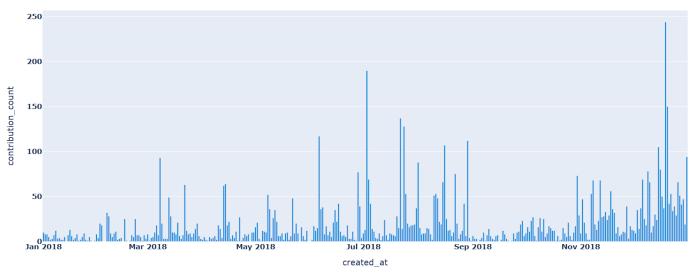
- It's weird to have high contributions all day!

## **Peak Dates**

In this year the peak dates are:

2018-12-19	244
2018-07-03	190
2018-12-20	150
2018-07-22	137
2018-07-24	128

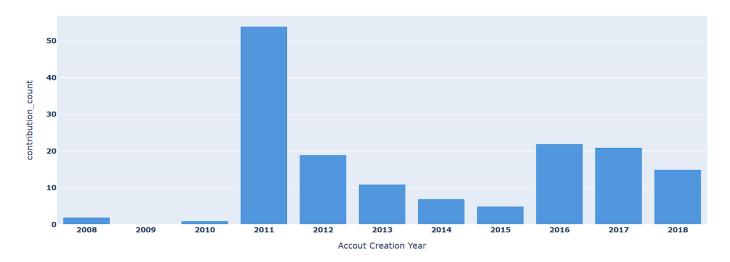




## Jul 03,2018.

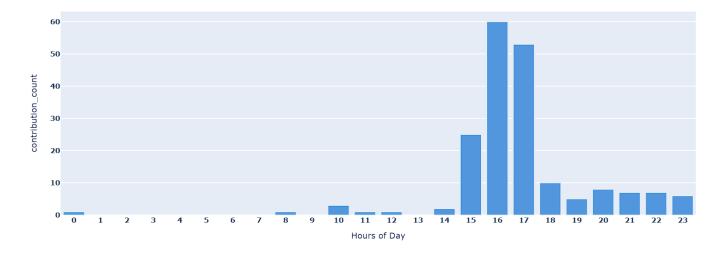
- 190 contributions were made by 98 users.

The creation year of the accounts contributed on the peak day (2018-07-03)



- The most active hours are (15,16,17).

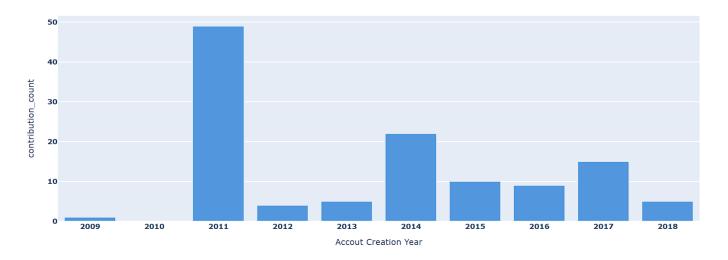
Number of contrbutions Comment/Submission in day hours



Jul 22,2018.

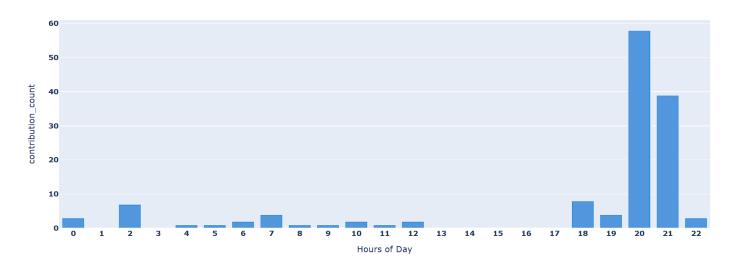
- 137 contributions were made by 50 users.

The creation year of the accounts contributed on the peak day (2018-07-22)



- The most active hours are (20,21).

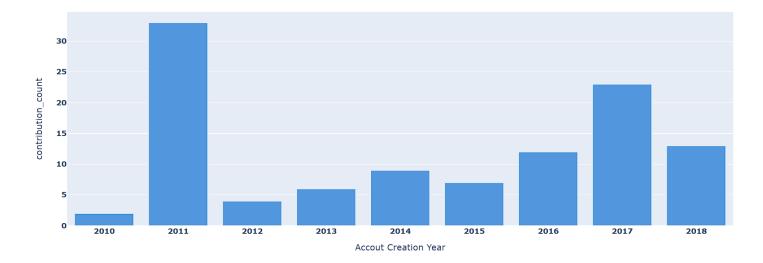
Number of contrbutions Comment/Submission in day hours



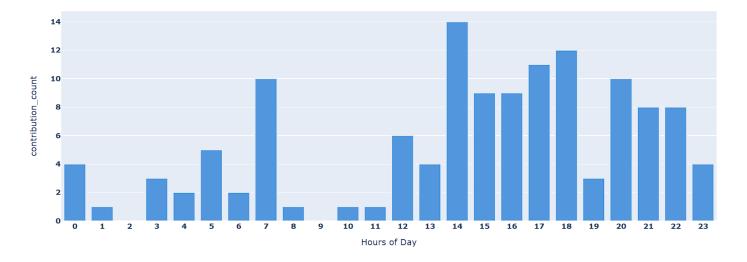
## Jul 24,2018

- 128 contributions were made by 79 users.

The creation year of the accounts contributed on the peak day (2018-07-24)



Number of contrbutions Comment/Submission in day hours

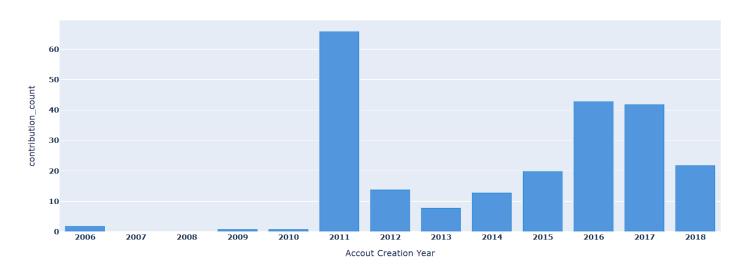


- Most hours are active.

## Dec 19,2018

- **244 contributions** were made by **96 users**.

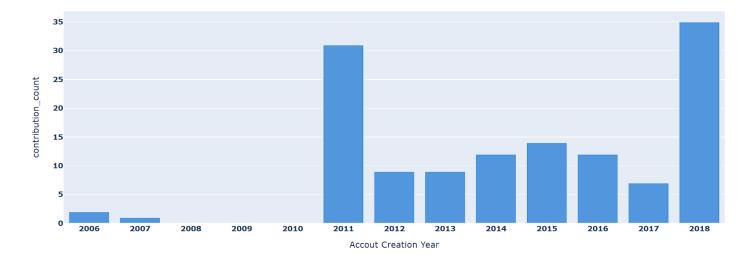
The creation year of the accounts contributed on the peak day (2018-12-19)



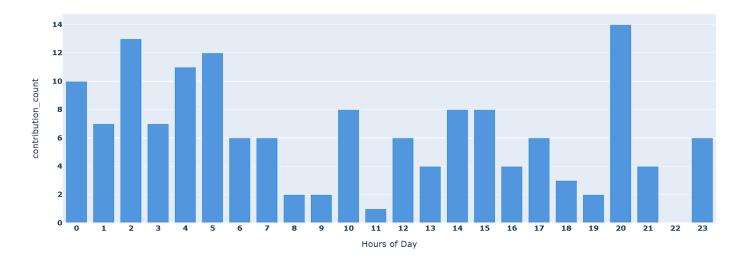
Dec 20,2018.

- **150 contributions** were made by **94 users**.

The creation year of the accounts contributed on the peak day (2018-12-20)



Number of contrbutions Comment/Submission in day hours

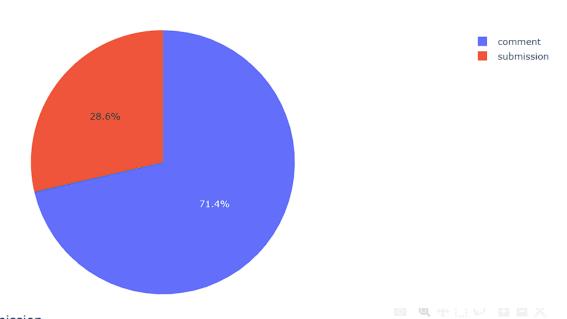


# **Exploratory Data Analysis**

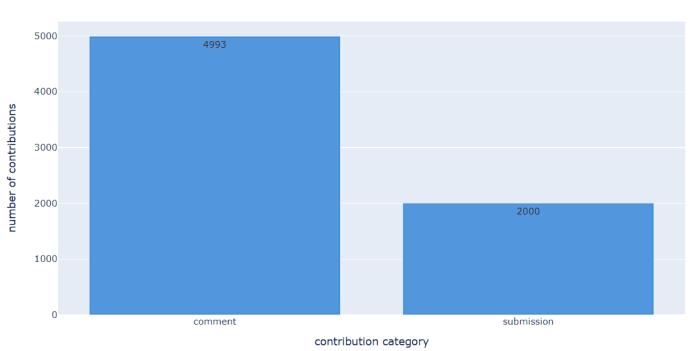
## Reddit Contributions (Comments / Submissions)

The # of submissions VS the # of comments

#### Comment or Submission



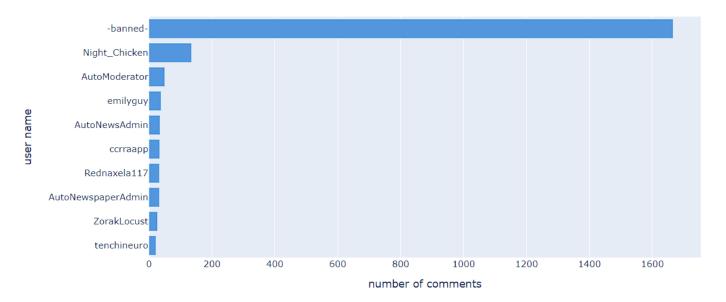
#### Comment or Submission



#### Most contributed user

	index	author
0	-banned-	17396
1	AutoModerator	1679
2	5th_Law_of_Robotics	298
3	CelebBattleVoteBot	282
4	Support_Johnny_Depp	256
5	DerHander	237
6	fluidmoviestar	200
7	empatheticapathetic	114
8	AutoNewsAdmin	105
9	wiklr	104

#### Most commented user in 2018



- 13.55% of comments are from banned users.

#### Further Investigate The Most Commented Users In 2018

#### AutoModerator

AutoModerator is a system built into reddit that allows moderators to define "rules" (consisting of checks and actions) to be automatically applied to posts in their subreddit.

Automoderator made 50 Comments in 2018 on those subreddits:

-	r/DC_Cinematic	12
-	r/JerkOffToCelebs	6
-	r/worldnews	4
-	r/AskReddit	4
-	r/Celebs	3
-	r/videos	2
-	r/unpopularopinion	2
-	r/youtube	2
-	r/celebsnaked	1
-	r/SubredditDrama	1

#### NightChicken

- NightChicken made 135 comments in 2018 in one subreddit
  - r/Celebs 135
- With this text:
  - What? What did she hear? 121
    What? What did she hear? 4
    Exactly.\n\n​ 1
    What? Thank you! 1
  - Yes! What? 1
- 104 comments were made on 2018-08-29 in only 26 minutes.

#### emilyguy

- **emilyguy** made 38 contributions in 2018
  - submission 34
  - comment 4
- Int those subreddits:
  - r/gentlemanboners
    r/Celebs
    r/celebsnaked
    r/celebnsfw
    r/WatchItForThePlot
    r/CaraDelevingne
    19
    4
    2
    r/CaraDelevingne
- With those texts:

-	Amber Heard	31
-	The Informers (2008)	2
-	The Playboy Club (2011)	1
-	Amber Heard and Jessica Alba	1
-	Amber Heard has an amazing body	1
-	with Amber Heard	1
-	The Informers	1

#### ccrraapp

- ccrraapp made 34 contributions in 2018
  - submission 27
  - comment 7
- Int those subreddits:
  - r/geekboners 19r/DCEUboners 14
  - r/gentlemanboners 1
- With those texts:
  - [Aquaman] Amber Heard 16- Amber Heard 10
  - etc...

#### AutoNewspaperAdmin

- AutoNewspaperAdmin made 33 Submissions in 2018 in one subreddit
  - r/AutoNewspaper 33

#### Rednaxela117

- Rednaxela117 made 33 contributions in 2018
  - submission 25
  - comment 8
- in one subreddit
  - r/Celebs 11
  - r/SexyWomanOfTheDay 10

2

- r/gentlemanboners 8
- r/PrettyGirls
- r/goddesses 1
- r/celebritylegs 1
- In those dates

	created_at	n_contributions
0	2018-02-22	8
3	2018-05-01	8
1	2018-02-23	2
2	2018-03-28	2
4	2018-05-02	2
13	2018-12-29	2
5	2018-05-03	1
6	2018-05-25	1
7	2018-07-10	1
8	2018-07-22	1

Check whether the users with the most contributions are mod<sup>5</sup>, gold<sup>6</sup> or having a verified email

- A list with most 24 contributed authors was made.
- Checked for the most negative comments users.
- The most negatively commented users are ('Night Chicken', 'AutoModerator', 'emilyguy', 'AutoNewsAdmin', 'ccrraapp', 'Au toNewspaperAdmin', 'Rednaxela117', 'ZorakLocust', 'RuleIV', 'tenchineuro', 'jef f98379', 'InfiniTitans', 'vonmark955', 'Chronos2016', 'ZadocPaet', 'nobodycares 65', 'bundt\_trundler', 'Queen1110', 'Count Fapula1', 'MightUlt-7', 'FlexOutlaw' ,'sagar7854','NaveHarder','Ezio9619').
- Those are the characteristics of the 24 users:
  - Has verified email
    - True 21
    - False 3
  - Is mod
    - False 18
    - True 6
  - Is\_gold
    - False 17
    - True 7
  - Is banned
    - False 20
    - **-** True 4
  - Comment karma
    - Min  $\rightarrow$  10
    - Max  $\rightarrow$  52848
    - Mean  $\rightarrow$  3940.28
    - Median  $\rightarrow$  24
    - Link karma
    - Min  $\rightarrow$  2
    - $Max \rightarrow 1870964$
    - Mean  $\rightarrow$  218104.72
    - Median  $\rightarrow$  12119.5
  - Banned unverified
    - others 17
    - banned 4
    - unverified 3
  - Creation year
    - others 12

    - banned 4 2018 2

<sup>&</sup>lt;sup>5</sup> Moderator: A moderator is just a regular redditor like you except with a few humble duties within a particular

<sup>&</sup>lt;sup>6</sup> Gold Reddit Gold was a premium membership, which allowed Reddit users a variety of additional features.

#### Investigate the text column

## Lets first check for the users using the word 'f\*ck

- This word is repeated 225 times.
- 3.2% of contributions contain this word.
- The authors of these submissions have the same submission text (contains f\*ck) 15.

#### The number of submissions with the word "F\*CK" in 2018



	created_at	n_contributions
11	2018-12-28	3
9	2018-09-27	2
0	2018-01-20	1
1	2018-02-10	1
2	2018-03-07	1
3	2018-04-15	1
4	2018-06-07	1
5	2018-06-16	1
6	2018-06-28	1
7	2018-07-08	1
8	2018-07-22	1
10	2018-12-25	1

#### - Users:

-	-banned-	65
-	Count_Fapula1	4
-	DariJC	3
-	TocTheElder	2
-	dirtydegrading	2
-	TEDHARDYLEEN	2
-	RedditZacuzzi	2
-	chi_dist90	2
-	cornylamygilbert	2
_	arsenalmat	2

#### - Comment or submission

-	comment	206		
_	submission	19		

#### - Subreddits:

-	r/JerkOffToCelebs	54
-	r/gentlemanboners	18
-	r/WatchItForThePlot	17
-	r/movies	14
-	r/Celebs	12
_	r/celebJObuds	11

-	r/MensRights	10
-	r/celebnsfw	10
-	r/DC_Cinematic	9
_	r/goddesses	8

#### - Dates:

2018-12-19 14 2018-12-20 10 2018-12-28 5 2018-06-06 5 2018-08-11 5 2018-05-02 5 2018-08-15 5 2018-07-24 4 2018-07-03 4 2018-05-08 4

#### The number of "F\*CK" contributions in 2018



- Top users who used f\*ck word
  - Count\_Fapula1 (4)
  - DariJC (3)

#### Count\_Fapula1:

- used the word f\*ck 4 times
- Negative Comments
- Has 16 contributions:
  - comment 13submission 3
- In those dates:

```
- 2018-12-05 4

- 2018-12-20 4

- 2018-12-26 2

- 2018-12-18 2

- 2018-12-23 1

- 2018-12-14 1

- 2018-12-29 1

- 2018-12-24 1
```

#### DariJC:

- used the word f\*ck 3 times
- Negative Comments
- Has 11 comments in two subreddits:
  - r/JerkOffToCelebs 9
  - r/celebJObuds 2
- In those dates
  - 2018-09-27 2 2018-11-19 2 2018-11-04 2 2018-12-31 1 2018-01-20 1 2018-08-29 1 2018-08-27 1 2018-11-14 1

## Check for the repeated text

Amber Heard 1045

```
[deleted]
171
What? What did she hear?
121
[removed]
52
[Aquaman] Amber Heard
Amber Heard - The Informers
20
Amber heard
14
amber heard
13
Your submission has been automatically removed for not including a valid category/subcategory tag. Tags are
essential to an optimal browsing experience for our users.\n\nSince your post was removed automatically, you
are free to resubmit it with an appropriate tag. You can find the tagging guide [here] (/r/DC Cinematic/wiki/
```

- "Amber Heard" only repeated more than 1000 times as a full contribution.
- A lot of contributions were deleted or removed.
- What? What did she hear? repeated 121 times we will also find What did she hear? .
- [Aquaman] Amber Heard repeated 47 times
- Amber Heard The Informers repeated 20 times.
- There are a lot of weird texts repeated a lot like:

"Well I'm going to start doing preliminary emails to voice my displeasure that a DV perp is even coming back to make more millions.\n\nAnd I won't be watching that shit or buying it either\n\nEdit: ok so this is who I emailed\n\njessica.zacholl@warnerbros.com\n\nShe's in WB's Media and Press Dept.\n\nAnd this is what I said \n\nSubject: Amber Heard in Aquaman 2, why?\n\nJust curious why a studio such as WB would employ a domestic violence perpetrator for their big release? I've been told Hollywood is progressive, but apparently you can abuse your spouse and that's ok? Well I will not be seeing this movie. I get so tired of the talking about how domestic violence is bad, but it seems all of the movie industry just sits silent. #MeToo indeed."

#### What? What did she hear?

148 comments on those subreddits:

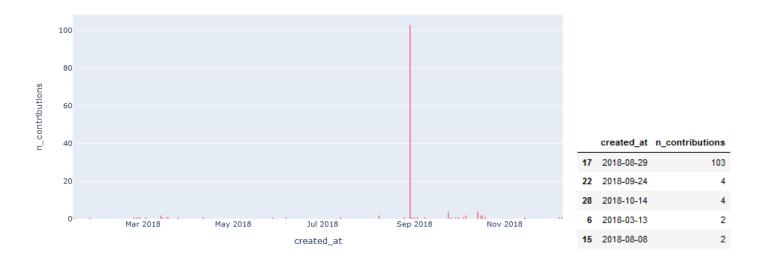
-	r/Celebs	131
-	r/goddesses	6
-	r/celebnsfw	2

- ...

#### From those authors:

- Night\_Chicken 128

The number of "What? What did she hear?" contributions in 2018



103 contributions, all of them are comments, with the same text in one day 29-08-2018 by one user
 Night\_Chicken in one subreddit r/Celebs in only 27 minutes.

#### [Aguaman] Amber Heard

#### - 30 Contributions

submission 18comment 12

#### - on those subreddits:

r/DC\_Cinematic
r/news
r/newstweetfeed
r/worldnews
r/Elon\_musketeers
r/movies

## - ...

#### From those authors:

- -banned- 5
- BSRussell 2
- ZorakLocust 2
- jeff98379 2
- iDevice\_Help 2

#### Amber Heard - The Informers

#### - 27 Submissions.

#### - on those subreddits:

r/WatchltForThePlot 8
r/celebsnaked 3
r/celebnsfw 3
r/Celebsnudess 2
r/Amber\_Heard 2
r/PopCultureGifs 2
r/CelebSexScenes 2

#### - ..

#### From those authors:

- banned- 9
- Ezio9619 8
- vonmark955 4
- vonjobi951 2
- GRJR721 2
- vonjobi956 1
- CelebsGW 1

#### Ezio9619

#### - 8 submissions in those subreddits:

r/WatchltForThePlot 3r/celebsnaked 3r/celebnsfw 1

- r/Celebhub 1
- In those dates:
  - 2018-08-14 4
  - 2018-07-24 4

#### **Amber Heard**

- 2213 contributions
  - submission 2000
  - comment 213
- on those subreddits:

-	r/Celebs	350
-	r/gentlemanboners	296
-	r/DCEUboners	87
-	r/DC_Cinematic	85
-	r/goddesses	79

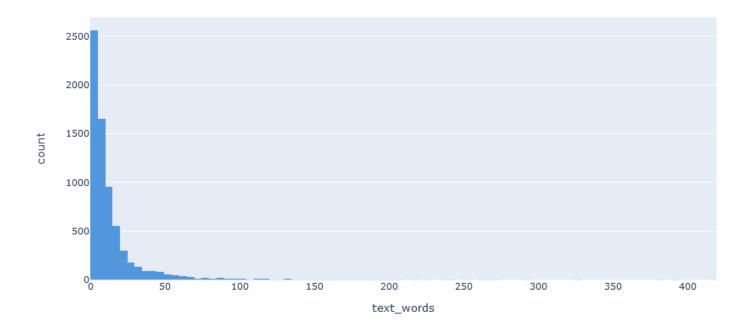
- From those users
  - -banned- 829
  - AutoNewsAdmin 35
  - emilyguy 34
  - AutoNewspaperAdmin 33
  - ccrraapp 27
  - ...

#### F\*ck Amber Heard

- 4 comments banned users on those subreddits:
  - r/movies 2
  - r/goddesses 2

#### Check the number of text words

#### number of words in each contribution



## Reddit Comments

## Comment or Submission (Top Level of Contrbution "Parent")



#### Reddit Submission Data

Investigating the Submission Text (Submissions with the most comments and replies)

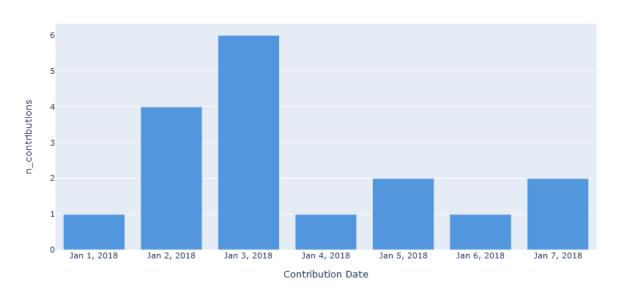
We can get the number of different submissions by looking only at the submissions dataframe, Also we can look at submission\_text with the most interactions (repeated submission\_text).

-	amber_heard	2490
-	DC_Cinematic	760
-	amber_heard_received_death_threats_and_was	254
-	amber_heard_the_informers	167
-	just_a_friendly_reminder_that_domestic_abuse_is	102
-	amber_heard_fans_upset_after_she_posted_a_racist	96
-	johnny_depp_claims_ex_amber_heard_punched_him	95
-	amber_heard_mirin_jason_momoa	77
-	johnny_depp_accuses_amber_heard_of_shitting_in	76
-	amber_heard_london_fields_2018	71
-	first_poster_london_fields_amber_heard_billy_bob	69
-	aquaman_actress_amber_heard_gets_called_racist	65
-	aquaman_amber_heard	64
-	new_aquaman_images_shows_jason_momoa_and_amber	63
-	amber_heard_film_london_fields_suffers_one_of_the	61
-	amber_heard_has_an_amazing_body	60
-	2018_comiccon_red_carpet_gal_gadot_melissa	51
-	amber_heard_stunning_in_red	47
-	personally_i_think_it_takes_a_lot_of_skill_to	44
-	amber_heard_in_the_informers	43

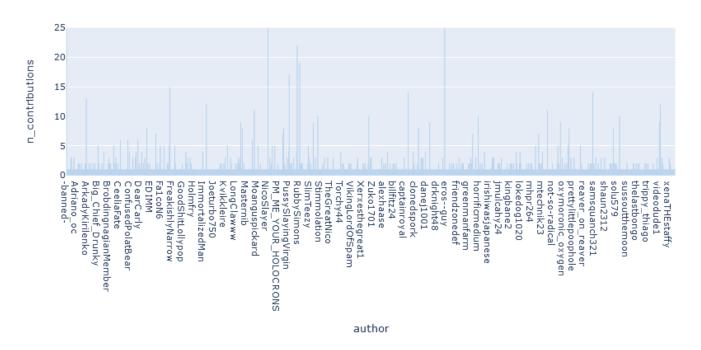
#### Amber\_heard

- 1044 submissions.

#### The number of contributions/date on these submissions



The number of contributions per author on these submissions

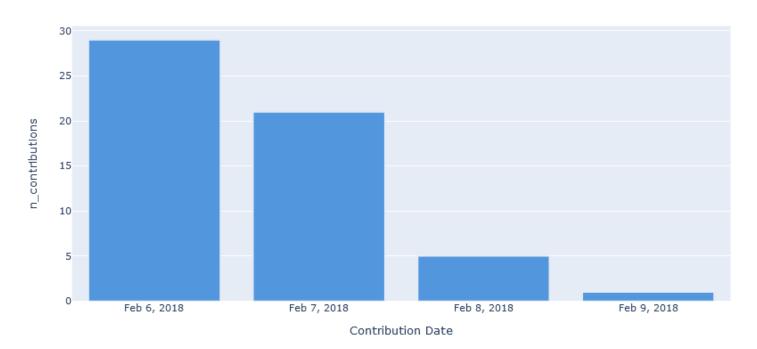


- Night\_Chicken made 122 submissions.
- emilyguy made 34 submissions.

#### DC\_Cinematic

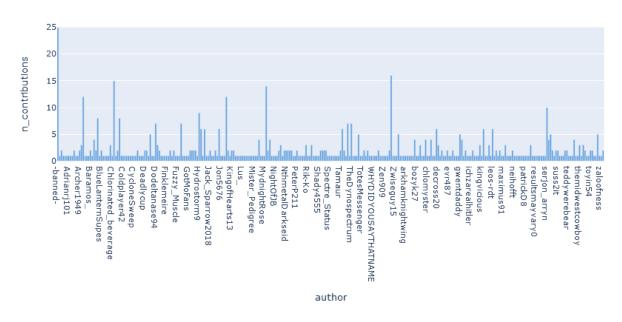
- 47 submissions.with 733 comments.

The number of contributions/date on these submissions



	author	n_contributions
0	-banned-	122
184	ZorakLocust	16
31	Chronos2016	15
115	NaveHarder	14
14	AutoModerator	12
93	KAIZOKUGARI23	12
270	serjon_arryn	10
78	Hydrostorm9	9
22	BatmanNewsChris	8
34	CliffordMoreau	8

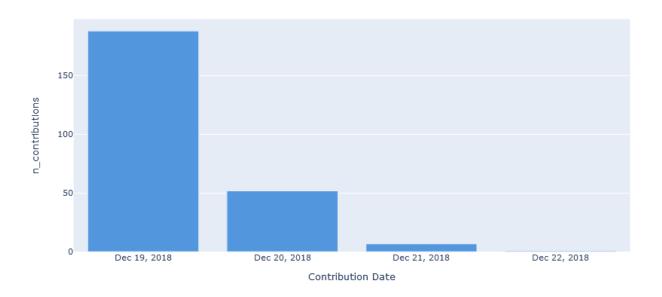
The number of contributions per author on these submissions



amber\_heard\_received\_death\_threats\_and\_was

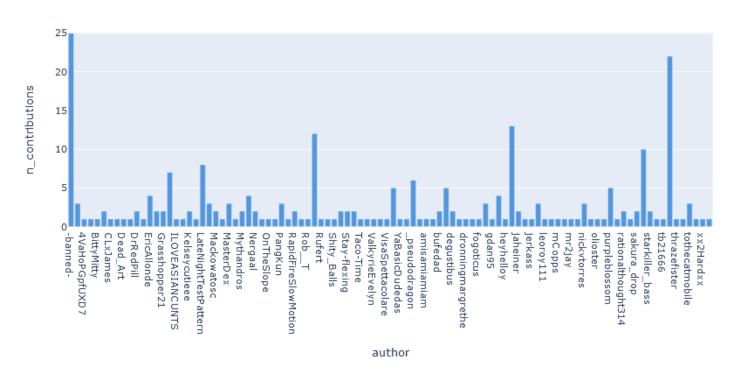
- one Submission with 253 comments.

The number of contributions/date on these submissions



	author	n_contributions
0	-banned-	30
91	tenchineuro	22
67	j3utton	13
37	Rogdozz	12
87	scyth3s	10
20	LateNightTestPattern	8
15	GreyFox860	7
52	_pseudodragon	6
82	purpleblossom	5
57	chambertlo	5

#### The number of contributions per author on these submissions

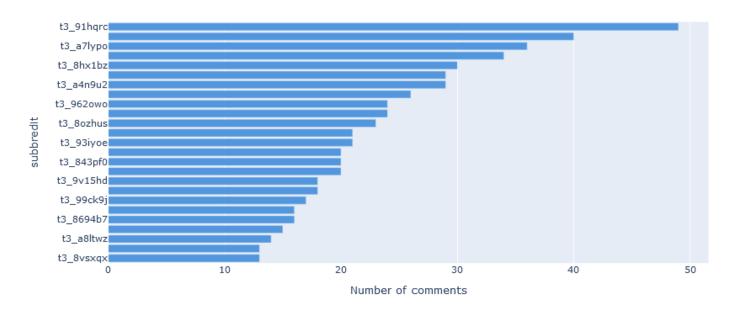


- tenchineuro made 22 comment in one day 19-12-2018 in one subreddit r/MensRights

Investigating the submissions with most comments(Top Level Comments)

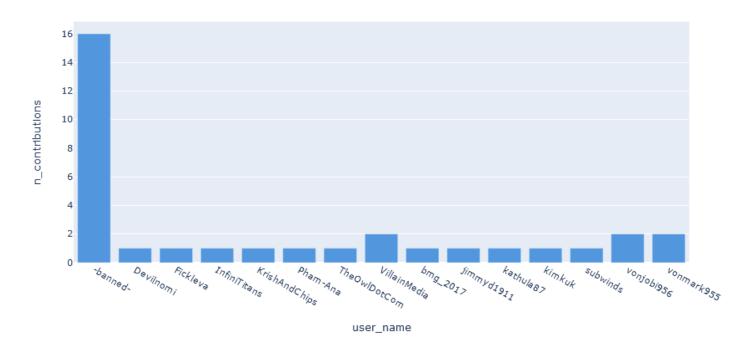
- t3\_91hqrc 49
- t3\_a6i1j4 40
- t3\_a7lypo 36
- t3\_9uzs60 34
- t3\_8hx1bz 30

#### sumbissions with most comments (Top Level Comments)

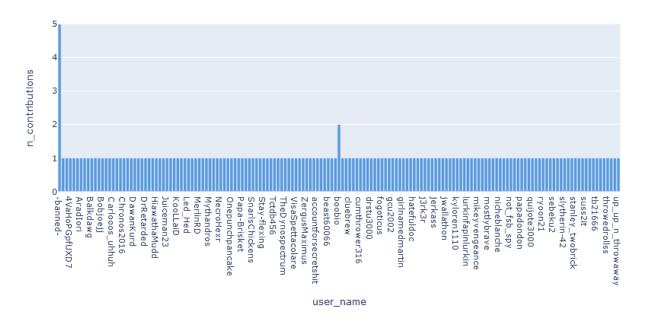


## Check the top 5 submissions in 2018

#### The number comments per author on these submissions



#### The number of parent comments per author on these submissions

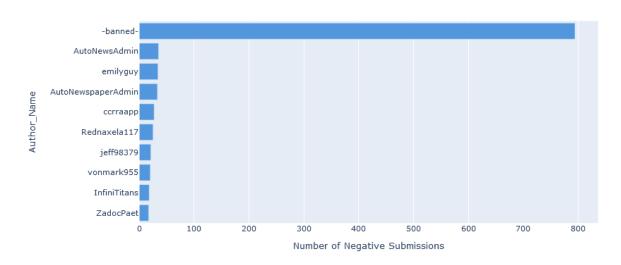


- There are 32 parent comments from banned accounts.

#### Invesigating authors with the most submissions

-	-banned-	794
-	AutoNewsAdmin	35
-	emilyguy	34
-	AutoNewspaperAdmin	33
-	ccrraapp	27
-	Rednaxela117	25
-	jeff98379	21
-	vonmark955	20
-	InfiniTitans	18
-	ZadocPaet	17

#### Authors with most Submissions



Check whether the users with the most submissions are mod, gold or having a verified email

-	-banned-	794
-	AutoNewsAdmin	35
-	emilyguy	34
-	AutoNewspaperAdmin	33
-	ccrraapp	27

	user_name	has_verified_email	is_mod	is_gold	is_banned	comment_karma	link_karma	user_created_at	banned_unverified	creation_year
1520	FlexOutlaw	True	False	False	False	5217.0	154864.0	2010-09-25 18:36:46	others	others
3937	GRJR721	True	True	False	False	891.0	167792.0	2011-11-15 20:48:23	others	others

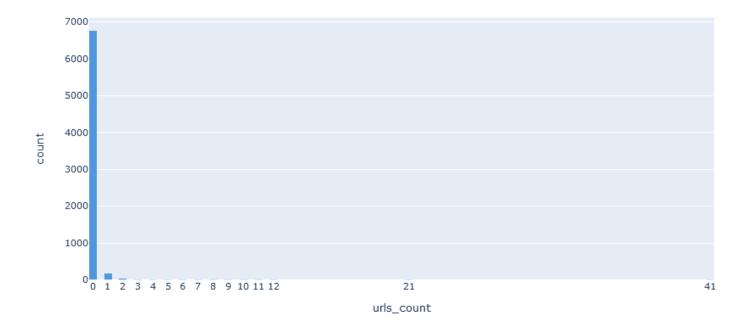
- The value counts of the users with the most submissions: has\_verified\_email
  - True 22
  - False 2
- The value counts of the users with the most submissions: is\_mod
  - True 18
  - False 6
- The value counts of the users with the most submissions: is\_gold
  - False 15
  - True 9
- The value counts of the users with the most submissions: is\_banned
  - False 16
  - True 8
- Comment\_karma
  - min -1.0
  - max 280938.0 - mean 24275.38
  - Median 24275.38
- link\_karma
- min 242.0
- max 2106386.0
- mean 385104.31
- median 385104.31
- The value counts of the users with the most submissions: banned\_unverified
  - others 14
  - banned 8
  - unverified 2
- The value counts of the users with the most submissions: creation\_year
  - others 12
  - banned 8
  - 2018 4

## **Submission URLS**

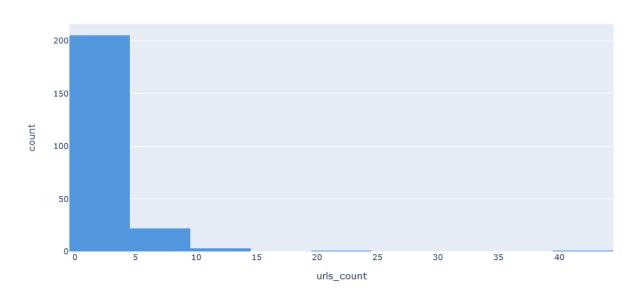
#### - 113 urls.

- [] 6761
- ['https://t.co'] 22
- ['https://www.reddit.com'] 21
- ['https://youtu.be'] 10
- ['https://www.youtube.com'] 9

#### Count of the number of URLS in each Contribution

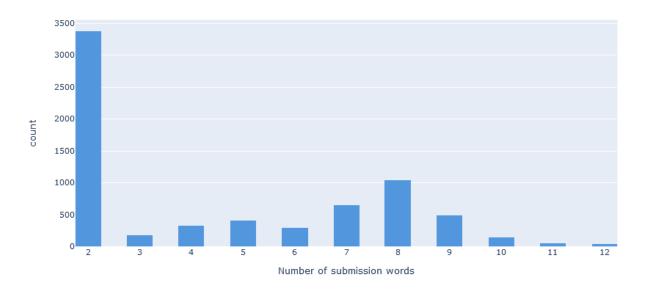


#### Count of the number of URLS in each Contribution



## Check the number of submission text words

#### number of words in submission text



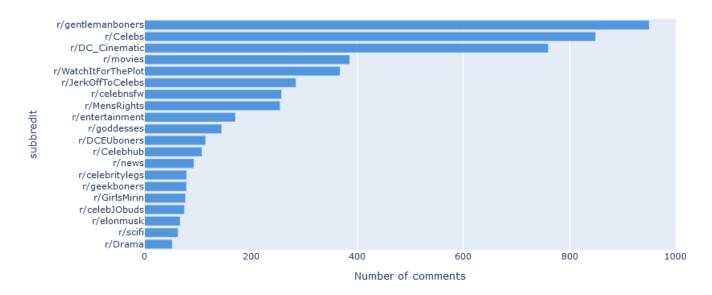
## Subreddits

## Most used Subreddits

## - 302 unique subreddits.

	index	subreddit
0	r/gentlemanboners	950
1	r/Celebs	849
2	r/DC_Cinematic	760
3	r/movies	386
4	r/WatchltForThePlot	368
5	r/JerkOffToCelebs	285
6	r/celebnsfw	258
7	r/MensRights	255
8	r/entertainment	171
9	r/goddesses	145
10	r/DCEUboners	115
11	r/Celebhub	108
12	r/news	93
13	r/celebritylegs	79
14	r/geekboners	79
15	r/GirlsMirin	77
16	r/celebJObuds	75
17	r/elonmusk	67
18	r/scifi	63
19	r/Drama	52

#### Most used subbredits

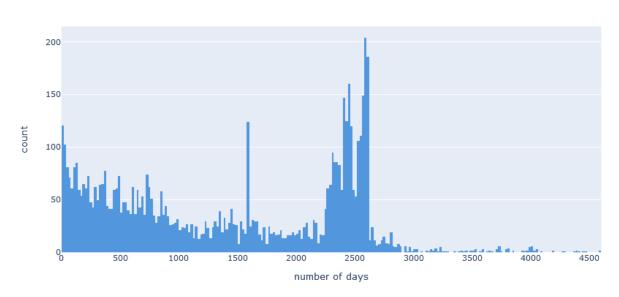


## Merged Users Data with Comments/Submissions Data

### <u>Difference in time between creating the account and posting In seconds</u>

- 1582.0 104
- 2599.0 37
- 2430.0 36
- 2449.0 35
- 487.0 31
- \_

#### days\_after\_creation



#### Posting Duration After Account Creation

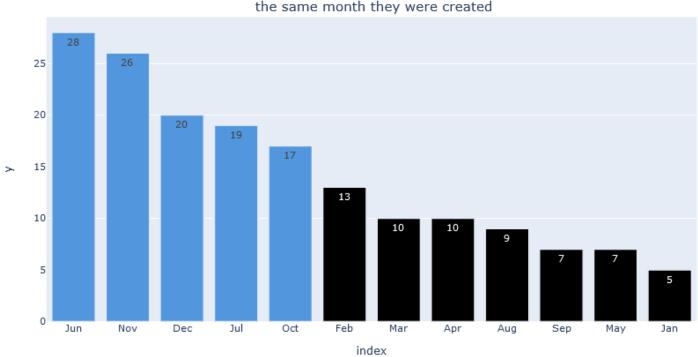
- The number of accounts posted the same day they were created was 24.
- The number of accounts posted the same week they were created was 62.
- The number of accounts posted the same month they were created was 171.

#### More investigations

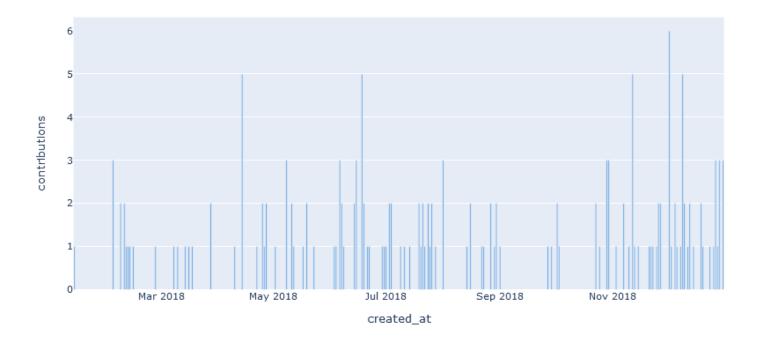
#### Same Month

- Jun 28
- Nov 26
- Dec 20
- Jul 19
- Oct 17
- Feb 13
- Mar 10
- Apr 10
- Aug 9
- Sep 7
- May 7
- Jan 5

# contributions of the accounts posted/commented the same month they were created

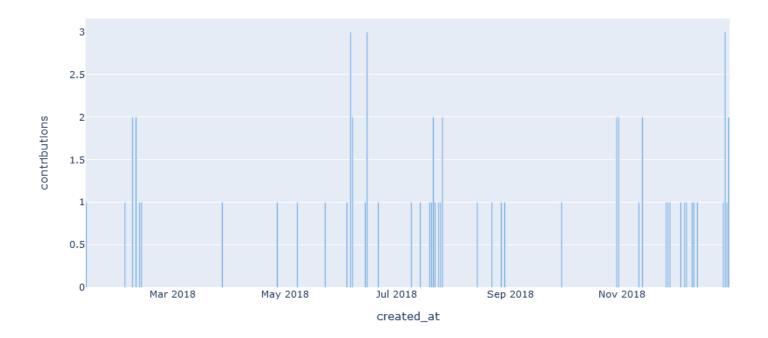


### contributions of the accounts posted/commented the same month they were created



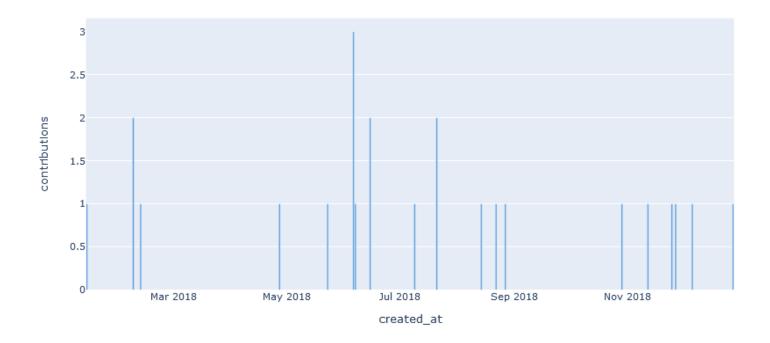
Same week

contributions of the accounts posted/commented the same week they were created



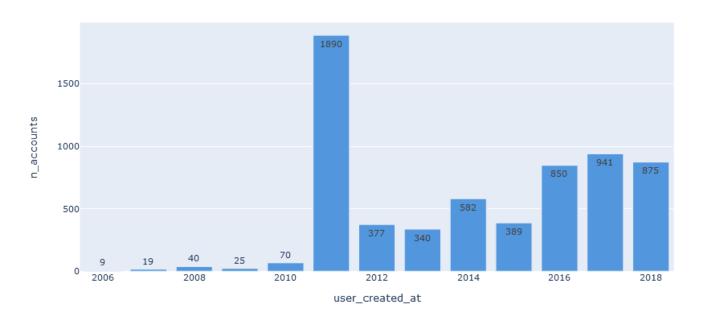
### Same day

### contributions of the accounts posted/commented the same day they were created



### Estimation of Number of User Accounts Created in each year / having contributions in 2018

#### Number of User Accounts Created in each year / having contributions in 2018



### Banned Unverified accounts

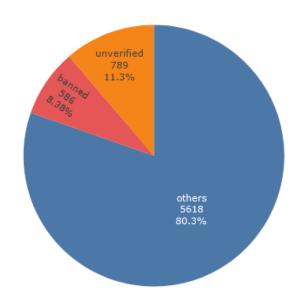
- We have 586 contributions in 2018 from banned accounts (275 users).
- We have 789 contributions in 2018 from unverified accounts (459 users).
- 875 users were made in 2018 and contributed in 2018.

#### **Contributions**

#### banned\_unverified

others	5618
unverified	789
banned	586

#### Contributions of banned / unverified /others in 2018



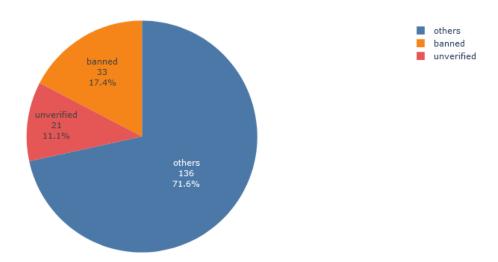
# others unverified banned

### Peak Day Contributions

#### banned\_unverified

others	136
banned	33
unverified	21

Contributions of banned / unverified /others on the peak day (2018-07-03)

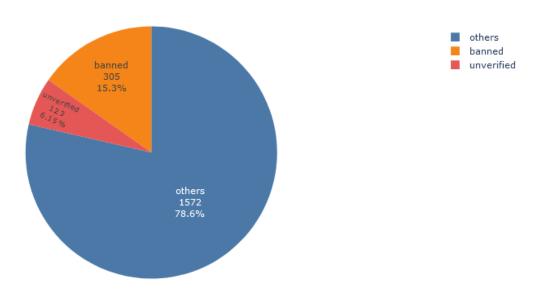


**NOTE:** 28.5% of peak day contributions were made by banned accounts and accounts with unverified email addresses.

#### **Submissions**

	banned_unverified
others	1572
banned	305
unverified	123

Submissions of banned / unverified /others in 2018



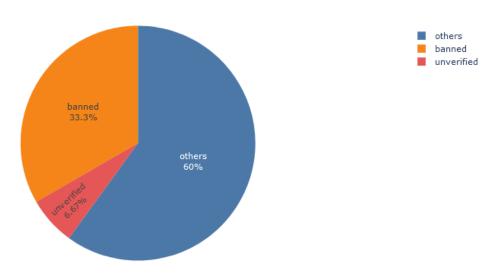
NOTE: About 21.45% of 2018 submissions were made by banned and unverified accounts.

### Peak Day Submissions

banned\_unverified

others	18
banned	10
unverified	2

Submissions of banned / unverified /others on the peak day (2018-07-03)

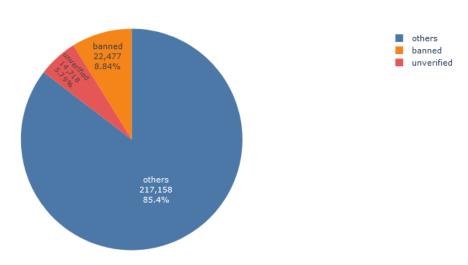


### **Total Scores**

score

	banned_unverified
22477.0	banned
217158.0	others
14718.0	unverified

Total Scores of banned/ unverified/ others in 2018

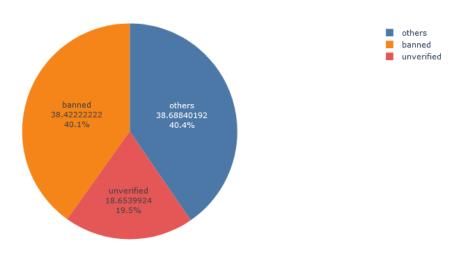


### Average Scores per contribution

- avg\_score = df\_scores\_relativ.score / df\_scores\_relative.n\_contributions

banned_unverified	score
banned	38.422222
others	38.688402
unverified	18.653992

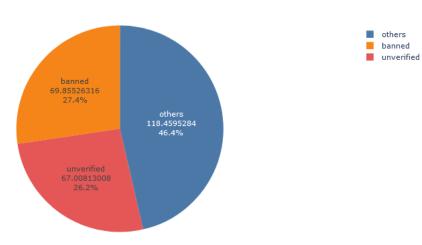
Average Scores of banned/ unverified/ others in 2018



### Average Scores per submission

anned_unverified	score
banned	69.855263
others	118.459528
unverified	67.008130

Average Scores submissions of banned/ unverified/ others in 2018

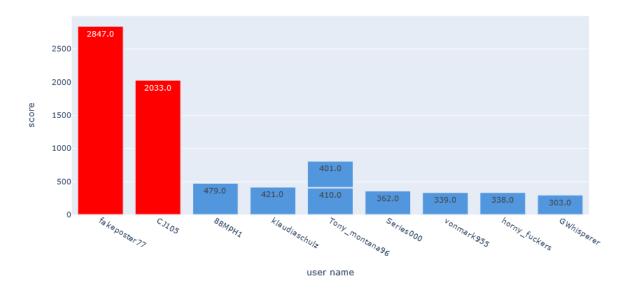


### **Banned Accounts**

-	count	585
-	mean	38.42
-	std	157.18
-	min	-53
-	25%	1
-	50%	3
-	75%	25
-	max	2847

### Banned-Accounts largest scores

#### Banned accounts highest contribution scores

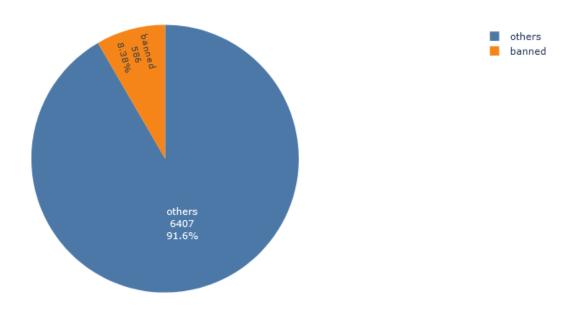


### Banned-Accounts minimum scores



### Contributions of Banned accounts in 2018

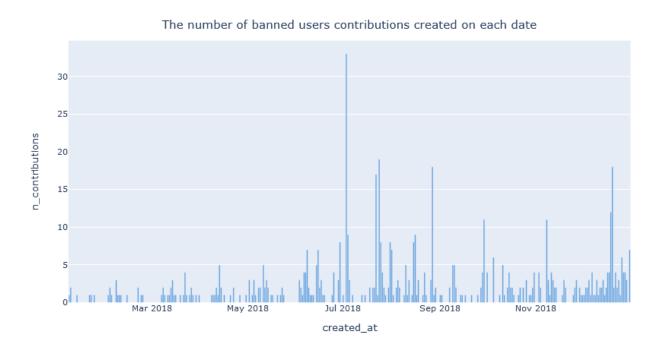
#### Contributions of Banned accounts in 2018



- The percentage % of 2018 contributions made by Banned accounts: 8.38

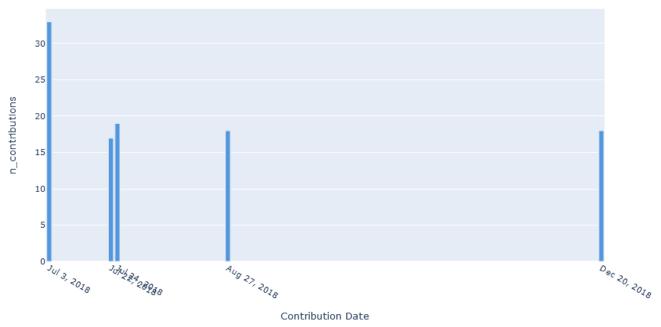
#### **Banned Accounts Contributions Peaks**

Which dates had the highest contributions of banned users?



	created_at	n_contributions
84	2018-07-03	33
95	2018-07-24	19
191	2018-12-20	18
120	2018-08-27	18
93	2018-07-22	17
190	2018-12-19	12
157	2018-11-08	11
136	2018-09-29	11
113	2018-08-16	9
85	2018-07-04	9

#### The number of banned users contributions on peak dates

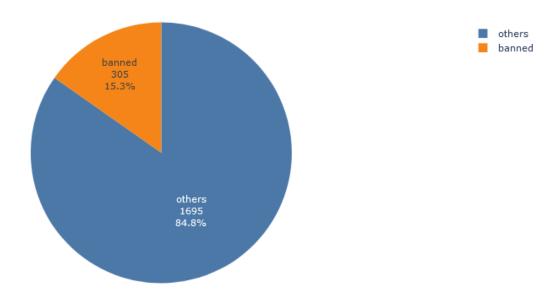


### Comments of Banned accounts in 2018

- Total banned accounts comments in 2018: 281

### Submissions of Banned accounts in 2018

#### Submissions of Banned accounts in 2018



### Top submissions

-	Amber Heard	142
-	Pinned to Amber Heard on Pinterest	8
-	Amber Heard - The Informers	8
-	Amber Heard - London Fields	5
-	Amber Heard & Amanda Seyfried	3

### Top users:

	subreddit	created_at
user_name		
vonmark955	13	13
naughtytwd	11	11
horny_fuckers	10	10
demonicmax56	9	9
vonjobi951	9	9
Pm-me-your-ass-photo	7	7
OrganicSatisfaction	5	5
CJ105	4	4
chrisdeli	4	4
Tony_montana96	4	4
PussySlayingVirgin	4	4

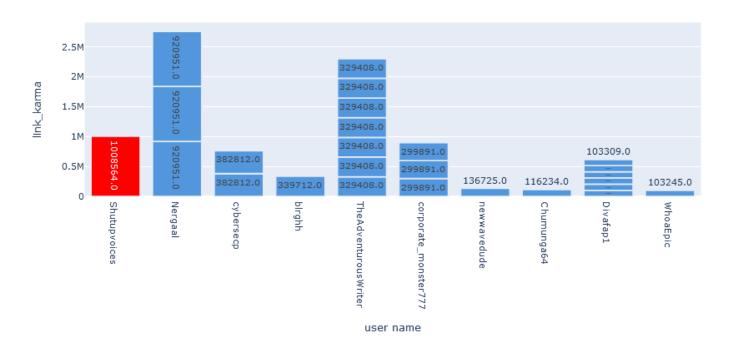
**NOTE: "michikoperdue":** this user made 3 contributions with the same text in the same time in 3 different subreddits

-	r/Celebsnudess	1
-	r/CelebNudes	1
-	r/celebJObuds	1

### **Unverified Accounts**

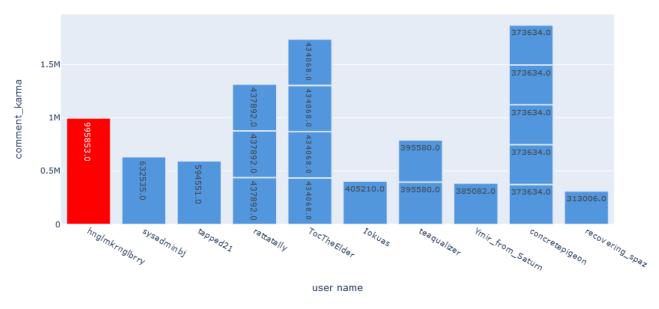
### Unverified Accounts With The Largest Link Karma

#### Unverified accounts with highest link karma



### Unverified Accounts With The Largest Comment Karma

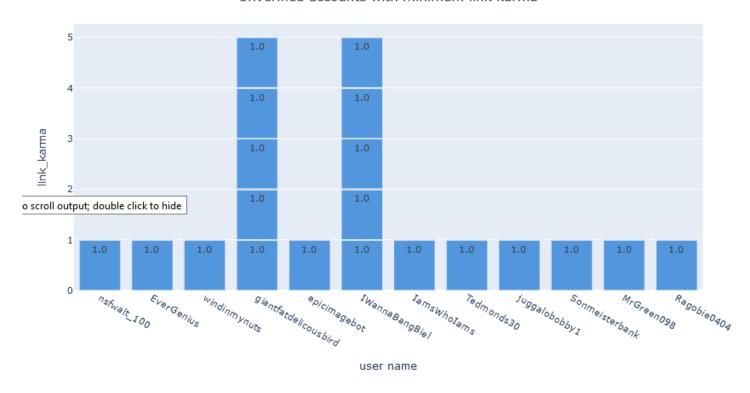
Unverified accounts with highest comment karma



hnglmkrnglbrry unverified account with the highest comment karma. Account Created at: 2017-01-30.

### Unverified Accounts With The Minimum Link Karma

#### Unverified accounts with minimum link karma



#### - A lot of unverified users has a link karma of 1

'nsfwalt\_100', 'EverGenius', 'windinmynuts',

'giantfatdelicousbird', 'giantfatdelicousbird',

'giantfatdelicousbird', 'epicimagebot', 'giantfatdelicousbird',

'giantfatdelicousbird', 'IWannaBangBiel', 'IWannaBangBiel',

'IWannaBangBiel', 'IWannaBangBiel', 'IWannaBangBiel',

'lamsWholams', 'Tedmonds30', 'juggalobobby1', 'Sonmeisterbank',

'MrGreen098', 'Ragobie0404'

### Unverified Accounts With The Minimum Comment Karma



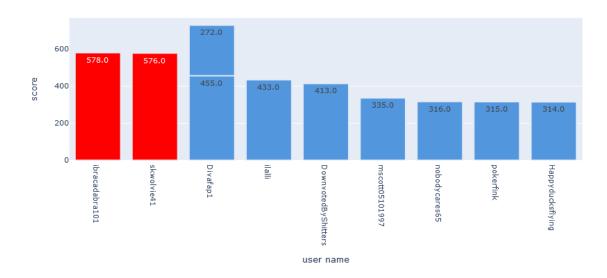
Unverified accounts with minimum comment karma

- murph420 has the minimum comment karma.

### Explore the largest scores

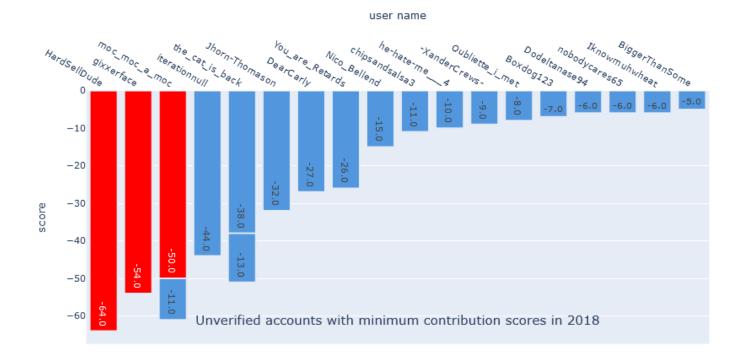
-	count	789
-	mean	18.65
-	std	55.2
-	min	-64
-	25%	1
-	50%	3
-	75%	11
_	max	578

Unverified accounts with highest contribution scores in 2018



ibracadabra101 this user has the highest score among the unverified users

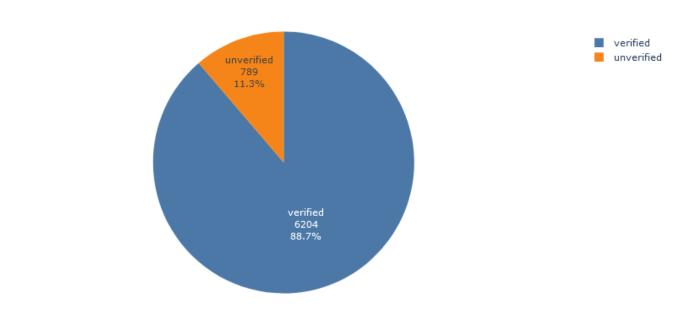
### Explore the minimum scores



HardSellDude this user has the minimum score among the unverified users

#### Contributions of Unverified accounts in 2018

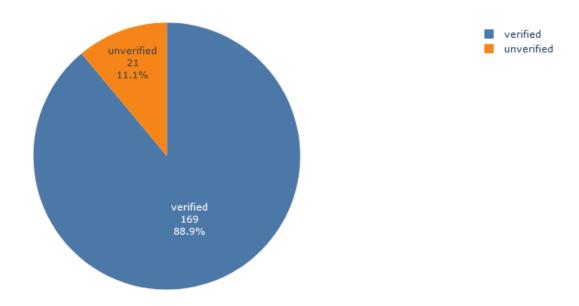
#### Contributions of Unverified accounts in 2018



-

### Peak day contributions (2018-07-03)

### Contributions of Unverified accounts on peak day (2018-07-03)

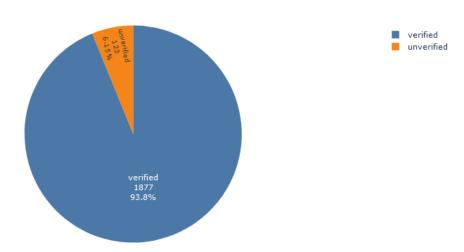


#### Comments

- Total banned accounts comments in 2018: 666
- Tests:
  - What did she hear? 3
  - Mfk 2
  - MFK 2
  - r/Lordosis 2
  - What is this from? 2

### **Submissions**

#### Submissions of Unverified accounts in 2018



user Doc-Sidious made 8 submissions in the same subreddit r/Celebhub ,6 of them were made in 2018-12-02

- 2018-12-02 6
- 2018-11-23 1
- 2018-11-10 1

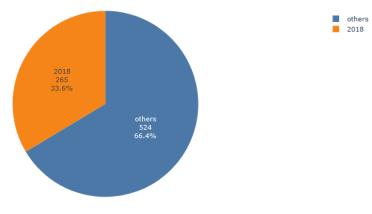
user CelebsSpot made 5 submissions, 4 of them in one subreddit r/sexycelebs

- 2018-11-12 2
- 2018-11-15 1
- 2018-11-22 1
- 2018-12-15 1

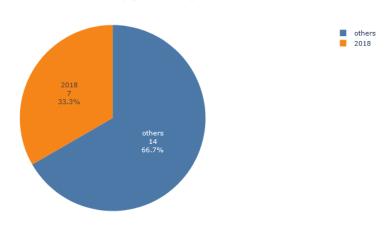
The account creation year of the unverified accounts contributed in 2018

### Contributions



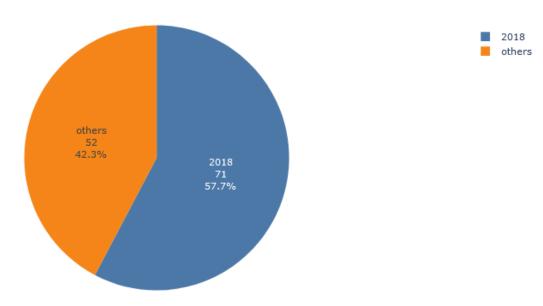


Contributions of unverified accounts on the peak day (2018-07-03)



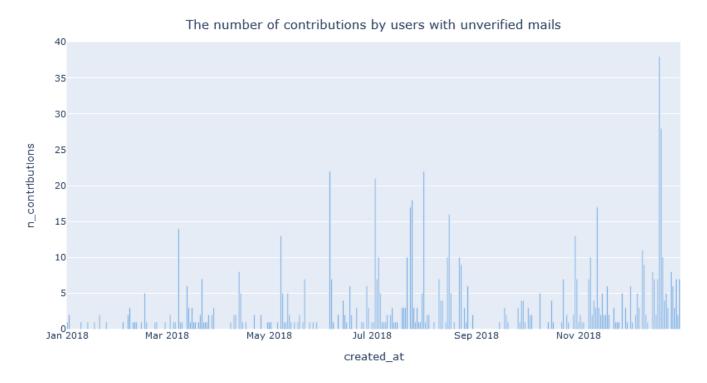
### **Submissions**

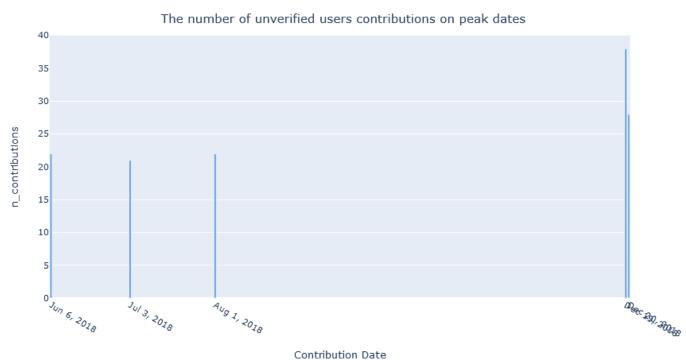
#### Submissions of Unverified accounts in 2018



- Unverified Accounts made 2 submissions on the peak day 2018-07-03

### Which dates had the highest contributions of unverified accounts?



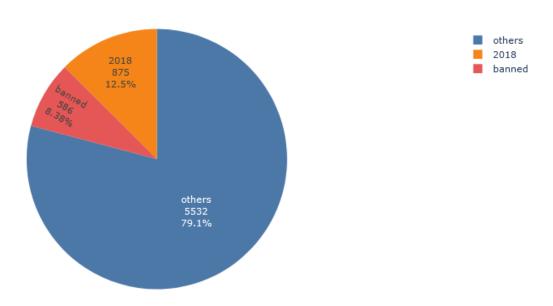


	created_at	n_contributions
68	2018-06-06	22
84	2018-07-03	21
109	2018-08-01	22
188	2018-12-19	38
189	2018-12-20	28

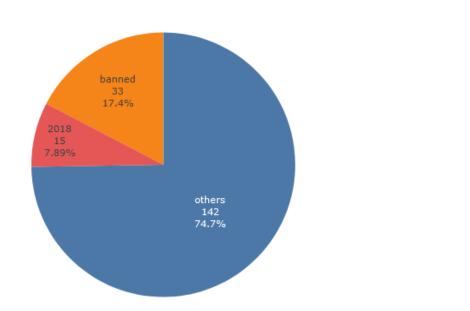
## **New Vs Others**

#### **New Accounts Contributions**

#### Contributions of 2018 accounts in 2018



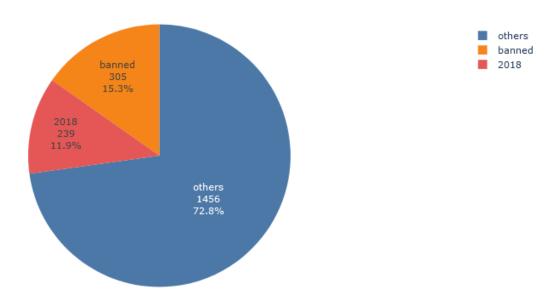
Contributions of 2018 accounts on the peak day (2018-07-03)



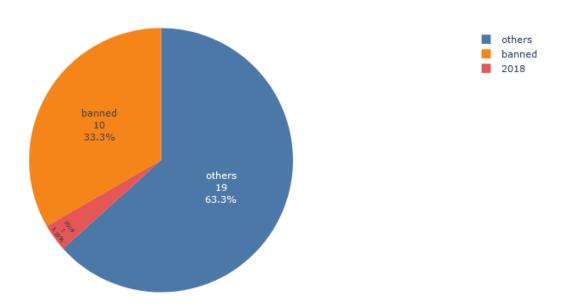
others
banned
2018

#### **New Accounts Submissions**

#### Submissions of 2018 accounts in 2018



### Submissions of 2018 accounts on the peak day (2018-07-03)



- We only have 30 submissions on peak day with about 160 comments and replies

#### Accounts created in 2018

#### Contributions

- Total contributions in 2018 made by newly created accounts(2018): 875
- The percentage % of 2018 contributions made by newly created accounts(2018): 12.51

#### Comments

- Total comments in 2018 made by newly created accounts(2018): 636

#### **Submissions**

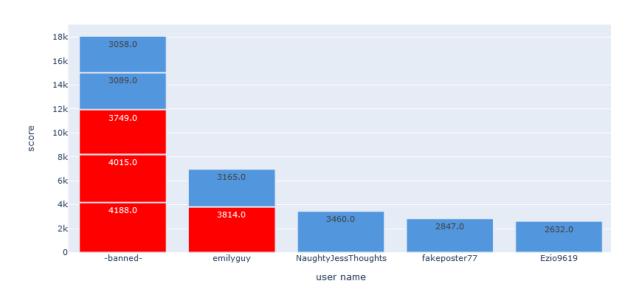
- Total submissions in 2018 made by newly created accounts(2018): 239
- The percentage % of 2018 submissions made by newly created accounts(2018): 11.95

#### 2018 Contributions Scores

#### Explore the largest scores

-	count	6987
-	mean	36.4
-	std	170
-	min	-92
-	25%	1
-	50%	3
-	75%	16
-	max	4188

#### Accounts with highest contribution scores in 2018



#### emilyguy

- Created on 2018-03-08
- Has only 38 contributions in 2018
  - o submission 34
  - o comment 4
- in those subreddits
  - o r/gentlemanboners 19
  - o r/Celebs 9
  - o r/celebsnaked 4
  - o r/celebnsfw 3
  - o r/WatchItForThePlot 2
  - o r/CaraDelevingne 1

#### Explore the minimum scores





#### MedivhTheEternal

- Created on 2018-03-08
- Has the minimum contribution scores in 2018

### Conclusions

#### Banned / Unverified Accounts

- About 20% of 2018 contributions were made by banned (8.38% --> 586) and unverified (11.3% --> 789) accounts.
- About 20% of 2020 submissions were made by banned (14.9% --> 1175) and unverified (6.48% -> 511) accounts.
- 28.5% of the peak day contributions (2018-07-03) were made by banned (17.4% --> 33 and unverified (11.1% --> 21) accounts.
- 21.45% of submissions of the peak day submissions (2018-07-03) were made by banned accounts (15.3% --> 305) and unverified accounts (6.15% --> 123)

#### Banned

fakeposter77 only made one submission on 11-11-2018.

**fakeposter77**: this user's contributions got the highest scores.

**michikoperdue**: this user made 3 contributions with the same text in the same time in 3 different subreddits

- r/Celebsnudess 1
- r/CelebNudes 1
- r/celebJObuds

#### Unverified

**Unverified Accounts Contributions in 2018** 

Accounts Creation Year	n_contributions
2018	33.6% (265)
others	66.4% (524)

#### **Unverified Accounts Submissions in 2018**

Accounts Creation Year	n_submissions
2018	57.7% (71)
others	42.3% (52)

Unverified Accounts Contributions in 2018 peak day (03/07/2018)

Accounts Creation Year	n_contributions
2018	33.3% (7)
others	66.7% (14)

Unverified Accounts Submissions in 2018 peak day (03/07/2018)

Accounts Creation Year	n_submissions
2018	57.7% (71)
others	42.3% (52)

- **hnglmkrnglbrry** unverified account with the highest score.
  - Account Created at: 2017-01-30
- A lot of unverified users has a link karma of 1

```
'nsfwalt_100', 'EverGenius', 'windinmynuts',
  'giantfatdelicousbird', 'giantfatdelicousbird',
  'giantfatdelicousbird', 'epicimagebot', 'giantfatdelicousbird',
  'giantfatdelicousbird', 'IWannaBangBiel', 'IWannaBangBiel',
  'IWannaBangBiel', 'IWannaBangBiel', 'IWannaBangBiel',
  'lamsWholams', 'Tedmonds30', 'juggalobobby1', 'Sonmeisterbank',
```

- murph420 has the minimum comment karma
- **ibracadabra101** this user has the highest score among the unverified users
- HardSellDude this user has the minimum score among the unverified users

#### 2018 Accounts

- 12.5% of 2018 contributions were made by users created in 2018.
- 11.9% of 2018 submissions were made by users created in 2018.
- 7.89% of the peak day contributions (03/07/2018) were made by users created in 2018.
- 3.33% of the peak day submissions (03/07/2018) were made by users created in 2018.

#### 2018 Accounts Contributions in 2018

Accounts Creation Year	n_contributions
2018	12.5% (875)
banned	8.38% (586)
others	79.1% (5532)

#### 2018 Accounts Submissions in 2018

Accounts Creation Year	n_submissions
2018	11.9% (239)
banned	15.3% (305)
others	72.8% (1456)

### 2018 Accounts Contributions in 2018 peak day (07/03/2018)

Accounts Creation Year	n_contributions
2018	7.89% (15)
banned	17.4% (33)
others	74.7% (142)

#### 2018 Accounts Submissions in 2018 peak day (07/03/2018)

Accounts Creation Year	n_submissions
2018	3.33% (1)
banned	33.3% (10)
others	63.3% (19)

#### emilyguy

- Created on 2018-03-08
- Has only 38 contributions in 2018
  - o submission 34
  - o comment 4
- in those subreddits
  - o r/gentlemanboners 19
  - o r/Celebs 9
  - o r/celebsnaked 4
  - o r/celebnsfw 3
  - o r/WatchItForThePlot 2
  - o r/CaraDelevingne 1

#### MedivhTheEternal

- Created on 2018-03-08
- Has the minimum contribution scores in 2018
  - She may be beautiful but shes just a high quality gold digger... screw her.. First Johnny Depp and then Elon Musk...
  - o Fair enough i guess :)
  - o I'll have to disagree man, im a huge fan of Johnny Depp no matter what i think hes right. I am biased perhaps but i cant help it
  - o I think marrying for money is a more dishonored action
  - o I dont play Hearthstone, I play WoW
  - o I completely agree